

CLAIMS

What is claimed is:

- 5 1. An article comprising:
- (a) a layer of fabric having a first surface and a second surface and comprising polytetrafluoroethylene fibers;
 - (b) a first composite comprising (i) a porous PTFE film having interconnected passages and pathways and (ii) a fluoropolymer adhesive, wherein said fluoropolymer adhesive is at least partially contained in said passages and pathways of said PTFE film,
 - (c) said first composite disposed adjacent to said first surface of said fabric, and
 - (d) wherein said article passes a Newark Flex test after 10,000 cycles.
- 10 15 2. An article as defined in claim 1 further comprising a second composite comprising (i) a porous PTFE film having interconnected passages and pathways and (ii) a fluoropolymer adhesive, wherein said fluoropolymer adhesive is at least partially contained in said passages and pathways of said PTFE film, said second composite disposed adjacent to said second surface of said fabric.
- 20 3. An article as defined in claim 2 wherein the article is waterproof.
4. An article as defined in claim 2 wherein the article is fire retardant.
5. An article as defined in claim 2 wherein the article is an architectural fabric for retractable, temporary, or permanent structures.
- 25 6. An article as defined in claim 2 wherein the article is an architectural fabric for retractable, temporary, or permanent structures and is adapted to be joined to itself by heat welding.

- (b) (5) (A) (B) (C)
7. An article as defined in claim 2 wherein said fabric comprises expanded polytetrafluoroethylene fibers.
 8. An article as defined in claim 2 wherein the article passes a Newark Flex test after 20,000 cycles.
- 5 9. An article as defined in claim 2 where in the article passes a Newark Flex test after 50,000 cycles.
10. An article as defined in claim 2 wherein said fluoropolymer adhesive is THV.
 11. An article as defined in claim 2 wherein said article does not delaminate after 24 hours in a wet flex test.
 12. An article as defined in claim 1 wherein the article is waterproof.
 13. An article as defined in claim 1 wherein the article is fire retardant.
 14. An article as defined in claim 1 wherein the article is an architectural fabric for retractable, temporary, or permanent structures.
- 15 15. An article as defined in claim 1 wherein the article is an architectural fabric for retractable, temporary, or permanent structures and is adapted to be joined to itself by heat welding.
20. An article as defined in claim 1 wherein said fabric comprises expanded polytetrafluoroethylene fibers.
 17. An article as defined in claim 1 wherein the article passes a Newark Flex test after 20,000 cycles.
 18. An article as defined in claim 1 where in the article passes a Newark Flex test after 50,000 cycles.

- H
O
W
P
E
R
C
P
19. An article as defined in claim 1 wherein said fluoropolymer adhesive is THV.
20. An article as defined in claim 1 wherein said article does not delaminate after 24 hours in a wet flex test.
- 5 21. An article comprising:
- (a) a layer of fabric having a first surface and a second surface and comprising polytetrafluoroethylene fibers;
- 10 (b) a first composite comprising (i) a porous PTFE film having interconnected passages and pathways and (ii) a fluoropolymer adhesive, wherein said fluoropolymer adhesive is at least partially contained in said passages and pathways of said PTFE film, said first composite disposed adjacent to said first surface of said fabric;
- 15 (c) a second composite comprising (i) a porous PTFE film having interconnected passages and pathways and (ii) a fluoropolymer adhesive, wherein said fluoropolymer adhesive is at least partially contained in said passages and pathways of said PTFE film, said second composite disposed adjacent to said second surface of said fabric;
- 20 (d) wherein the article is a fire retardant architectural fabric for retractable, temporary, or permanent structures and is adapted to be joined through heat welding techniques and passes a Newark Flex test after 10,000 cycles.
22. A method of making an architectural fabric for a retractable, temporary, or permanent structure comprising the steps of:
- 25 (a) providing a layer of fabric having a first surface and a second surface and comprising polytetrafluoroethylene fibers;
- (b) providing a first layer and a second layer of porous expanded polytetrafluoroethylene membrane;
- (c) providing a first layer and a second layer of THV;

(d) laminating said first layer of THV to said first layer of porous expanded polytetrafluoroethylene membrane to form a first THV/membrane composite;

5

(e) laminating said first THV/membrane composite to said first surface of said fabric;

(f) laminating said second layer of THV to said second layer of porous expanded polytetrafluoroethylene membrane to form a second THV/membrane composite; and

10

(g) laminating said second THV/membrane composite to said second surface of said fabric.

PRINTED IN U.S.A.